Name _____ Class _____ Date _____

Lesson 4-7

Least Common Multiple

Lesson Objective	NAEP 2005 Strand: Number Properties and Operations
To find the LCM of two or more numbers	Topic: Number Operations
	Local Standards: _____

Vocabulary

A multiple of a number is _____

_____

A common multiple is _____

_____

The least common multiple (LCM) of two or more numbers is _____

_____

Examples

1 Finding the LCM Using Lists of Multiples Find the least common multiple of 6 and 9.

multiples of 6: ☐, ☐, ☐, ☐, ☐, ☐, ☐ ← List multiples of each number.

multiples of 9: ☐, ☐, ☐, ☐ ← ☐ and ☐ are common multiples.

The least common multiple is ☐.

2 Using Prime Factorizations Use prime factorizations to find the LCM of 6, 9, and 15.

Write the prime factorizations for 6, 9, and 15. Then circle each different factor where it appears the greatest number of times.

$6 = \square \times \square$ ← 2 appears ☐.

$9 = \square \times \square$ ← 3 appears the most often here (☐).

$15 = \square \times \square$ ← 5 appears ☐. Don't circle 3 again.

$\square \times \square \times \square \times \square = \square$ ← Multiply the circled factors.

The LCM of 6, 9, and 15 is ☐.

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Quick Check

1. List multiples to find the LCM.

a. 10, 12

multiples of 10: ☐, ☐, ☐, ☐, ☐, ☐

multiples of 12: ☐, ☐, ☐, ☐, ☐, ☐

The LCM of 10 and 12 is ☐.

b. 7, 10

2. Use prime factorizations to find the LCM of 6, 8, and 12.

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Practice 4-7

Least Common Multiple

List multiples to find the LCM of each set of numbers.

1. 5, 10 _____
2. 2, 3 _____
3. 6, 8 _____
4. 8, 10 _____
5. 5, 6 _____
6. 12, 15 _____
7. 9, 15 _____
8. 6, 15 _____
9. 6, 9 _____
10. 3, 5 _____
11. 4, 5 _____
12. 9, 21 _____

Use prime factorizations to find the LCM of each set of numbers.

13. 18, 21 _____
14. 15, 21 _____
15. 18, 24 _____
16. 15, 30 _____
17. 24, 30 _____
18. 24, 72 _____
19. 8, 42 _____
20. 16, 42 _____
21. 8, 56 _____

22. At a store, hot dogs come in packages of eight and hot dog buns come in packages of twelve. What is the least number of packages of each type that you can buy and have no hot dogs or buns left over?

_____